IN THE CLAIMS

1 (Previously Presented). A multiprocessor device comprising:

at least three interconnected optical transceivers for direct communication between said transceivers; and

at least three processors, each processor coupled to one transceiver, each transceiver including a wavelength division multiplexer to enable optical communications with the other processors, each transceiver to notify a first of the three transceivers when a second of the three transceivers is receiving a signal from a third of the three transceivers.

2 (Previously Presented). The device of claim 1 wherein each transceiver includes an optical transmitter including a laser.

3 (Previously Presented). The device of claim 1 wherein each transceiver includes an optical receiver tunable to a particular input wavelength.

4 (Previously Presented). The device of claim 1 wherein each transceiver is assigned a wavelength for communicating with the other processors.

Claims 5 and 6 (Canceled).

7 (Previously Presented). The device of claim 1 wherein said transceiver includes a dispersive element to disperse light reflected by said reflector.

8 (Previously Presented). The device of claim 7 wherein said dispersive element includes a microelectromechanical structure.

9 (Previously Presented). The device of claim 1 wherein each transceiver transmits a light beam together with a code identifying a sending and a receiving processor.

10 (Previously Presented). The device of claim 1 wherein, when one transceiver is receiving a wavelength division multiplexed signal from another transceiver, the one transceiver broadcasts to all other transceivers that the one transceiver is busy.

11 (Previously Presented). A method comprising:

establishing a multiprocessor device including at least three directly interconnected systems, each system including a processor and an optical transceiver;

enabling optical communications between said systems using wavelength division multiplexing; and

notifying a first system when a second system is receiving an optical communication from a third system.

12 (Original). The method of claim 11 including assigning a unique wavelength to each of said processors.

13 (Original). The method of claim 11 including scanning for the wavelengths of any of said other processors.

14 (Previously Presented). The method of claim 13 including transmitting a light beam having a predetermined wavelength, and transmitting a code that identifies the transmitting system and the intended receiving system.

15 (Previously Presented). The method of claim 14 wherein the receiving system identifies the wavelength of the incoming beam and the code accompanying said beam, and locks to the wavelength of the transmitting system.

Claim 16 (Canceled).

17 (Previously Presented). The method of claim 15 including broadcasting the fact that the second system is receiving a beam to all other systems in the device.

18 (Previously Presented). The method of claim 17 indicating when said second system is no longer communicating with said third system.

19 (Previously Presented). The method of claim 11 including using a code transmitted by the third system to determine if a given system is the intended recipient of a beam transmitted from the third system.

20 (Previously Presented). The method of claim 11 including optically interconnecting each of said systems.

21 (Previously Presented). A computer readable medium storing instructions that enable a first processor-based system of a multiprocessor-based device including a second processor-based system and a third processor-based system to:

identify a light communication from a second processor-based system intended for said first processor-based system;

tune to said wavelength; and

notify a first processor when a second processor is receiving an optical communication from a third processor.

22 (Previously Presented). The medium of claim 21 further storing instructions that enable the first processor-based system to scan through a plurality of wavelengths of other processor-based systems to identify a signal intended for said first processor-based system.

23 (Previously Presented). The medium of claim 21 further storing instructions that enable the first processor-based system to receive a code that indicates whether a given light communication is intended to be sent to said first processor-based system.

24 (Previously Presented). The medium of claim 23 further storing instructions that enable said first processor-based system to tune to said wavelength to the exclusion of other wavelengths.

25 (Previously Presented). The medium of claim 24 further storing instructions that enable said first processor-based system to broadcast a signal indicating that said first processor-based system is tuned exclusively to said wavelength.

26 (Previously Presented). The medium of claim 25 further storing instructions that enable the first processor-based system to notify a third processor-based system when said first processor-based system is no longer engaged in a communication with said second processor-based system.

27 (Previously Presented). The medium of claim 21 further storing instructions that enable said first processor-based system to identify a second processor-based system to communicate with and to determine whether said second processor-based system is currently occupied with a communication with another processor-based system.

28 (Previously Presented). The medium of claim 21 further storing instructions that enable said first processor-based system to communicate with at least two other processor-based systems using optical communications and wavelength division multiplexing.

29 (Previously Presented). The medium of claim 28 further storing instructions that enable said first processor-based system to communicate with other processor-based systems using an assigned wavelength.

30 (Previously Presented). The medium of claim 29 further storing instructions that enable said first processor-based system to transmit a code that identifies said first processor-based system and an intended receiving processor-based system.